

### **DETAILED ACTION**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Graciela Cowger (Reg. No. 42444) on 3/24/09.

The application has been amended as follows:

#### **In the Claims:**

- 1a. In claim 1, in line 7, after "the received QAM RF signal", -- to form corrected I and Q baseband signals -- has been added.
- 1b. In claim 1, in line 8, "modulating the I and Q baseband signals" has been deleted.
- 1c. In claim 1, in line 9, "the modulated" has been deleted and replaced with – the corrected --.
- 1d. In claim 11, in line 7, after "the received QAM RF signal", -- to form corrected I and Q baseband signals -- has been added.
- 1e. In claim 11, in line 8, "modulating the I and Q baseband signals" has been deleted.
- 1f. In claim 11, in line 9, "the modulated" has been deleted and replaced with – the corrected --.

Remarks:

2. The above Examiner's Amendment was made to correct some minor formalities and make the claimed subject matter in claims 1 and 11 clear.

***Allowable Subject Matter***

3. Claims 1, 3- 9, 11, 13- 15, 17-21 and 23 are allowed.

The following is an examiner's statement of reasons for allowance:

- 3a. Regarding claims 1 and 11 are allowed because prior art of record fails to disclose mapping the corrected I and Q baseband signals to a unit circle on a QPSK constellation, in combination with each and every other limitation of the claim.
- 3b. Claims 3-6, 13 and 14 are allowed as being dependent on claims 1 and 11.
- 3c. Regarding claims 7, 15 and 19 21, prior art of record fails the QAM receiver wherein the acquisition module comprises: a M-ary phase shift keying (PSK) mapper to map the corrected I and Q baseband signals to a quantized QPSK signal constellation, in combination with each and every other limitation of the claims.
- 3d. Claims 8, 9, 7, 18, 20 and 23 are allowable as being dependent on claims 7, 15, 19 and 21.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Sander ford et al. (US 7477694 B2) uses QAM demodulator to translate modulation domain data into a quadrature constellation in I and Q (real and imaginary) and to remove inherent DC offset.

### ***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINEETA S. PANWALKAR whose telephone number is (571)272-8561. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tesfaldet Bocure/

Primary Examiner, Art Unit 2611

/V. S. P./

Examiner, Art Unit 2611